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SUMMARY OF CONCENTRATIONS OF INORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (MG/KG)

10:42 FRIDAY, SEPTEMBER 12, 1986

SAMPLE NUMBER	SAMPLE MEDIA	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON
SD-01	SURFACE_SOIL	7640	17	9.4	57	1.10	2.7	2290	34.0	6.9	41	15400
SD-02	SURFACE_SOIL	6210	13	6.7	53	1.00	2.1	1680	19.0	11.0	23	10200
SD-03	SURFACE_SOIL	7300	.	.	62	0.75	.	6190	24.0	7.8	10	10300
SD-04	SURFACE_SOIL	8250	.	6.3	213	1.30	.	41300	117.0	6.4	108	15300
SD-05	SURFACE_SOIL	5740	.	20.0	284	1.70	.	1220	38.0	18.0	26	15500
SD-07	SURFACE_SOIL	7100	.	22.0	409	1.20	.	439	45.0	31.0	282	13800
SD-08	SURFACE_SOIL	9010	.	6.4	37	0.85	.	325	23.0	2.8	17	24200
SD-09	SURFACE_SOIL	7410	.	13.0	200	0.77	.	525	20.0	2.9	149	8900
SD-10	SURFACE_SOIL	5080	.	17.0	290	0.84	4.2	525	99.0	5.9	235	7450
SD-12	SURFACE_SOIL	5890	.	54.0	605	1.50	.	11300	26.0	6.8	80	17100
SD-13	SURFACE_SOIL	8170	.	6.1	58	1.50	2.5	1710	26.0	28.0	47	14400
SD-14	SURFACE_SOIL	9340	.	15.0	522	1.60	.	17900	1060.0	18.0	332	43400
SD-15	SURFACE_SOIL	17600	.	9.7	92	0.82	.	2780	84.0	5.2	48	23600
SD-16	SURFACE_SOIL	16900	.	9.2	46	0.82	.	1560	32.0	4.9	16	21700
SD-17	SURFACE_SOIL	12600	.	.	40	0.73	.	1450	25.0	2.9	11	19300
SD-18	SURFACE_SOIL	7260	.	2.9	60	0.83	.	6310	19.0	5.5	28	1920
SD-19	SURFACE_SOIL	7940	.	4.8	54	2.50	.	1400	40.0	21.0	41	40200
SS-01	SURFACE_SOIL	4960	.	6.9	83	.	.	.	17.0	.	50	10306
SS-02	SURFACE_SOIL	7330	.	4.5	.	.	.	.	21.0	.	134	10800
SS-03	SURFACE_SOIL	23300	.	.	.	.	.	.	31.0	.	.	24100
SD-01	LEAD	92.0	909	99	20.0	813	114	43.0	173	.	.	.
SD-02	LEAD	135.0	1050	348	17.0	1070	85	25.0	53	.	.	.
SD-03	LEAD	76.0	1100	319	13.0	1310	174	28.0	86	.	.	.
SD-04	LEAD	347.0	14100	402	44.0	1720	655	29.0	1120	.	.	.
SD-05	LEAD	241.0	602	774	27.0	438	67	58.0	124	.	.	.
SD-07	LEAD	436.0	560	1430	31.0	395	67	57.0	142	.	.	.
SD-09	LEAD	22.0	500	55	7.1	810	70	45.0	69	.	.	.
SD-10	LEAD	109.0	600	498	13.0	748	63	26.0	48	.	.	.
SD-10	LEAD	249.0	349	221	9.0	340	63	51.0	62	.	.	.
SD-12	LEAD	1930.0	1880	464	45.0	491	103	58.0	1440	.	.	.
SD-13	LEAD	96.0	765	864	33.0	719	54	31.0	138	.	.	.
SD-14	LEAD	952.0	2980	720	367.0	1090	245	119.0	1690	.	.	.
SD-15	LEAD	136.0	1220	107	55.0	751	68	48.0	138	.	.	.
SD-16	LEAD	40.0	1070	64	13.0	657	66	42.0	50	.	.	.
SD-17	LEAD	23.0	910	61	6.6	833	76	34.0	35	.	.	.
SD-18	LEAD	73.0	1140	299	12.0	975	115	26.0	100	.	.	.
SS-01	LEAD	34.0	758	161	51.0	629	.	86.0	147	.	.	.
SS-02	LEAD	124.0	252	51	19.0	298	.	22.0	19	.	.	.
SS-03	LEAD	153.0	592	225	19.0	351	.	30.0	414	.	.	.
SS-04	LEAD	8.4	746	44	19.0	365	.	47.0	40	.	.	.

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SUMMARY OF CONCENTRATIONS OF INORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (MG/KG)

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SAMPLE NUMBER	SAMPLE MEDIA	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON
SS-05	SURFACE_SOIL	20300	.	4.5	96	0.81	.	269	32.0	.	13	23200
TP-A	TEST_PIT_SOIL	5210	.	9.3	194	1.40	4.2	50700	20.0	16.0	169	14600
TP-B	TEST_PIT_SOIL	13100	.	56.0	263	0.97	2.7	32400	1970.0	27.0	851	47700
TP-C	TEST_PIT_SOIL	6130	.	.	69	0.67	2.6	13000	153.0	12.0	1400	26900
TP-D	TEST_PIT_SOIL	7490	.	.	67	0.65	2.9	6010	137.0	11.0	95	25600
TP-E	TEST_PIT_SOIL	8250	.	8.3	126	.	7.0	3190	24.0	7.7	136	13600
TP-F	TEST_PIT_SOIL	7780	.	8.0	178	1.40	10.0	6190	95.0	8.0	103	23500
TP-G	TEST_PIT_SOIL	10400	.	9.8	159	.	3.1	11000	101.0	11.0	78	30500
TP-H	TEST_PIT_SOIL	12500	.	.	16	1.10	.	221000	93.0	9.4	100	23900
TP-I	TEST_PIT_SOIL	1720	.	.	156	.	.	1870	3.8	2.3	14	2600
TP-J	TEST_PIT_SOIL	11400	.	6.9	344	1.40	4.5	8220	34.0	11.0	44	27500
TP-K	TEST_PIT_SOIL	7270	.	11.0	262	0.64	5.0	9360	476.0	22.0	134	36000
TP-L	TEST_PIT_SOIL	3950	.	20.0	268	1.30	.	27700	229.0	7.9	88	12100
TP-M	TEST_PIT_SOIL	6400	.	166.0	294	2.00	.	3660	324.0	16.0	181	31400
TP-N	TEST_PIT_SOIL	6280	.	10.0	269	1.50	4.4	41200	19.0	18.0	33	23700
TP-O	TEST_PIT_SOIL	9380	.	32.0	350	1.70	.	53800	1190.0	50.0	409	83500
TP-P	TEST_PIT_SOIL	4420	.	23.0	302	2.20	3.5	18800	277.0	7.6	124	23300
TP-Q	TEST_PIT_SOIL	11703	.	6.3	45	2.10	.	152	88.0	16.0	15	60700
TP-R	TEST_PIT_SOIL	7280	.	.	86	0.87	.	1220	37.0	40.0	50	17000
TP-S	TEST_PIT_SOIL	9900	.	.	.	.	.	.	16.0	.	.	.
SS-05	LEAD	1030	69	.	357	.	.	.	46.0	18	.	.
TP-A	CYANIDE	448	559	16.0	404	.	.	19	34.0	77	.	.
TP-B	MAGNESIUM	2300	490	1670.0	611	12	280	13	64.0	532	0.42	.
TP-C	MANGANESE	1520	289	207.0	517	36	113	36	413.0	302	0.92	35.0
TP-D	NICKEL	1020	285	173.0	309	17.0	101	.	25.0	71	.	.
TP-E	POTASSIUM	469	96	12.0	493	.	59	.	31.0	241	0.16	.
TP-F	SILVER	527	135	75.0	298	1.9	263	.	48.0	466	0.16	.
TP-G	SODIUM	1360	183	93.0	611	.	81	21	79.0	939	0.64	.
TP-H	TIN	1260	257	150.0	599	.	127	14	62.0	479	1.40	.
TP-I	VANADIUM	4200	86	140.0	422	.	273	12	3.8	99	.	.
TP-J	ZINC	401.0	330	17.0	619	4.0	40	12	44.0	145	.	.
TP-K	MERCURY	5010.0	1051	90.0	519	31	69	31	62.0	1440	0.30	.
TP-L	COPPER	1040.0	906	268.0	583	14	305	14	30.0	189	0.30	.
TP-M	SELENIUM	583.0	2170	1060.0	497	.	256	14	109.0	10300	1.20	.
TP-N	LEAD	23.0	697	32.0	760	.	826	24	49.0	1480	0.30	.
TP-O	CYANIDE	23.0	697	32.0	760	.	826	24	49.0	1480	0.30	.
TP-P	MAGNESIUM	6910	6910	1290.0	1490	24	2450	70	40.0	532	0.28	.
TP-Q	ANTIMONY	549.0	2220	225.0	1340	.	2020	70	55.0	825	0.40	.
TP-R	ARSENIC	462.0	1690	77.0	1080	.	190	.	78.0	522	0.30	.
TP-S	BARIUM	13.0	519	38.0	1200	.	140	.	71.0	65	.	.
TP-T	BERYLLIUM	26.0	597	24.0	642	.	148	.	31.0	65	0.21	.

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SUMMARY OF CONCENTRATIONS OF INORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (MG/KG)

SAMPLE NUMBER	SAMPLE MEDIA	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	
TP-P	TEST_PIT_SOIL	10100	.	21.0	794	1.40	99.0	23000	85	18.0	781	53300	
TP-Q	TEST_PIT_SOIL	10300	.	21.0	6370	1.40	10.0	25906	1340	20.0	189	39500	
TP-R0	TEST_PIT_SOIL	7030	.	62.0	1670	1.20	19.0	146000	101	24.0	76	65800	
TP-R1	TEST_PIT_SOIL	14700	.	.	638	.	4.1	56500	76	6.6	333	23500	
TP-S	TEST_PIT_SOIL	12000	.	7.3	85	1.20	.	10600	45	34.0	39	30200	
TP-T	TEST_PIT_SOIL	14000	.	46.0	307	0.98	5.8	12100	79	5.9	142	22200	
TP-U	TEST_PIT_SOIL	4110	.	.	50	1.10	.	1860	16	9.3	30	24300	
TP-V	TEST_PIT_SOIL	5670	14	10.4	1140	.	.	36500	66	8.4	187	89900	
TP-W	TEST_PIT_SOIL	8170	14	10.6	2510	0.90	.	19500	218	59.0	1790	72400	
TP-X	TEST_PIT_SOIL	8150	.	1.1	31	.	.	218	24	.	18	25500	
TP-Y	TEST_PIT_SOIL	14500	.	5.2	52	0.90	.	430	25	5.6	16	22900	
SAMPLE NUMBER	LEAD	CYANIDE	MAGNESIUM	MANGANESE	NICKEL	POTASSIUM	SILVER	SODIUM	TIN	VANADIUM	ZINC	MERCURY	SELENIUM
TP-P	2710.0	0.7	2140	534	72.0	1100	5.3	3230	52	28	2420	1.10	.
TP-Q	530.0	.	2140	361	652.0	1340	.	915	59	79	512	0.23	.
TP-R0	503.0	.	3810	1140	68.0	945	.	933	272	36	1020	0.32	.
TP-R1	13000.0	50.9	.	.	.	.	.	.	.	.	.	.	.
TP-S	194.0	.	1590	836	47.0	820	.	131	.	37	319	.	.
TP-T	472.0	.	956	167	136.0	782	.	198	20	348	709	1.60	.
TP-U	7.0	.	253	144	19.0	575	.	83	.	33	89	.	.
TP-V	1130.0	.	2020	398	63.0	542	.	620	.	40	1820	1.20	.
TP-W	1940.0	.	2620	1220	4530.0	355	.	362	.	38	1710	0.60	2.5
TP-X	0.9	.	664	34	9.3	341	.	227	.	44	36	.	.
TP-Y	14.0	.	1050	130	12.0	343	.	229	.	39	53	0.10	.

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SUMMARY OF CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

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SAMPLE NUMBER	SAMPLE MEDIA	CARBON DISULFIDE	1,1,1 TRICHLOROETHANE	TRANS 1,2 DICHLOROETHENE	CHLOROFORM	TRICHLOROETHENE	BENZENE	4-METHYL 2-PENTANONE	TETRACHLOROETHENE	TOLUENE (METHYL BENZENE)	CHLOROETHENE	ETHYLBENZENE	TOTAL XYLENES
SD-01	SURFACE_SOIL	.	.	.	.	.	.	.	.	.	.	.	.
SD-02	SURFACE_SOIL	.	.	.	.	.	.	.	.	.	.	.	.
SD-03	SURFACE_SOIL	2	.	.	.	.	.	.	.	49	.	.	.
SD-04	SURFACE_SOIL	.	.	.	.	.	.	.	.	.	.	.	.
SD-05	SURFACE_SOIL	.	.	.	.	.	.	.	.	3	.	.	.
SD-07	SURFACE_SOIL	.	.	.	.	.	.	.	.	7	.	.	.
SD-09	SURFACE_SOIL	2	.	.	.	.	.	.	.	6	.	.	.
SD-10	SURFACE_SOIL	.	.	.	.	.	.	.	.	6	.	.	.
SD-12	SURFACE_SOIL	.	.	.	.	.	.	.	.	9	.	.	.
SD-13	SURFACE_SOIL	.	.	.	.	.	.	.	.	5	.	.	.
SD-14	SURFACE_SOIL	.	.	.	.	.	.	.	.	2	.	.	.
SD-15	SURFACE_SOIL	.	.	.	.	.	.	.	.	73	.	.	.
SD-16	SURFACE_SOIL	.	.	.	.	.	.	.	.	67	.	.	.
SD-17	SURFACE_SOIL	.	.	.	.	.	.	.	.	77	.	.	.
SD-18	SURFACE_SOIL	.	.	.	.	.	.	.	.	14	.	.	.
SD-19	SURFACE_SOIL	.	.	.	.	.	.	.	.	9	.	.	.
SD-20	SURFACE_SOIL	.	.	.	.	.	.	.	.	.	.	.	.
SD-21	SURFACE_SOIL
SD-22	SURFACE_SOIL
SD-23	SURFACE_SOIL
SD-24	SURFACE_SOIL

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SUMMARY OF CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

SAMPLE NUMBER	SAMPLE MEDIA	CARBON DISULFIDE	1,1,1 TRICHLOROETHANE	TRANS 1,2 DICHLOROETHENE	CHLOROFORM	TRICHLOROETHENE	
TP-P	TEST_PIT_SOIL	2	.	.	.	.
TP-Q	TEST_PIT_SOIL	6	.	.	.	.
TP-R0	TEST_PIT_SOIL	4	.	.	.	.
TP-R1	TEST_PIT_SOIL	.	.	.	.	.
TP-S	TEST_PIT_SOIL	.	.	.	.	.
TP-T	TEST_PIT_SOIL	.	.	.	.	.
TP-U	TEST_PIT_SOIL	.	.	.	.	.
TP-V	TEST_PIT_SOIL	.	.	.	.	.
TP-W	TEST_PIT_SOIL	.	.	.	.	.
TP-X	TEST_PIT_SOIL	.	.	.	.	.
TP-Y	TEST_PIT_SOIL	.	.	.	.	.
SAMPLE NUMBER	BENZENE	4-METHYL 2-PENTANONE	TETRACHLOROETHENE	TOLUENE (METHYL BENZENE)	CHLOROBEZENE	ETHYLBENZENE	TOTAL XYLENES
TP-P	.	5	.	16	62	4	5
TP-Q	.	5	.	4	5	5	2
TP-R0	.	.	.	3	180	.	.
TP-R1	.	.	.	17000000	.	360000	1400000
TP-S	2	.	.	11	.	3	610
TP-T	.	.	.	3	3	.	.
TP-U
TP-V	.	.	.	610000	.	120000	390000
TP-W
TP-X
TP-Y

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SUMMARY OF CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

SAMPLE NUMBER	SAMPLE MEDIA	ISOPHORONE	BENZOIC ACID	NAPHTHALENE	2-METHYL NAPHTHALENE	2,4,6-TRICHLORO PHENOL	ACENAPHTHYLENE	DIBENZOFURAN
SD-01	SURFACE_SOIL	..	..	..	..	..	..	..
SD-12	SURFACE_SOIL	..	..	..	..	..	..	..
SD-03	SURFACE_SOIL	..	..	..	..	..	..	..
SD-04	SURFACE_SOIL	..	..	..	..	..	..	..
SD-05	SURFACE_SOIL	..	950	40	..	..	..	..
SD-07	SURFACE_SOIL	..	470	35	..	53	..	..
SD-09	SURFACE_SOIL	..	..	..	..	..	..	..
SD-10	SURFACE_SOIL	..	..	..	..	..	..	..
SD-12	SURFACE_SOIL	..	..	..	..	..	..	..
SD-13	SURFACE_SOIL	..	890	..	..	..	..	..
SD-14	SURFACE_SOIL	330	..	250	..	..	..	..
SD-15	SURFACE_SOIL	200	..	42	..	..	..	..
SD-16	SURFACE_SOIL	..	..	..	..	..	..	..
SD-17	SURFACE_SOIL	..	..	..	..	..	..	..
SD-18	SURFACE_SOIL	..	..	..	..	..	..	..
SD-01	SURFACE_SOIL	410	..	..	..	..	..	..
SD-02	SURFACE_SOIL	..	..	..	..	..	..	..
SD-03	SURFACE_SOIL	..	590	..	..	..	..	..

SAMPLE 246-DINITRO PENYACHLORO PHENANTHRENE ANTHRACENE FLUORANTHENE PYRENE (BENZO (D,E,F) PHENANTHRENE) BUTYLAZNYL BENZO (A) BIS (2-ETHYLHEXYL) PHTHALATE

SD-01	..	140	..	..	310	160	500	110	..	1400
SD-02	660	36	..	..	47	43	88	53	..	180
SD-03	..	79	..	..	110	120	360	92	..	300
SD-04	..	350	..	87	550	340	2400	600	..	2200
SD-05	..	160	..	..	190	160	1300	200	..	400
SD-07	..	120	..	..	200	160	510	140	..	340
SD-09	..	..	..	..	..	60	51	..	..	150
SD-10	..	72	..	..	98	60	360	..	..	150
SD-12	..	150	..	..	1300	1200	1000	680	..	500
SD-13	..	370	..	270	2300	1900	3400	1100	..	2100
SD-14	..	51	..	..	120	71	510	44	..	530
SD-15	..	1700	..	390	2000	23000	23000	1100	..	6600
SD-16	..	190	..	33	250	150	350	91	..	380
SD-17	..	..	..	..	67	62	220	..	..	480
SD-18	..	40	67	54	180	48	..	220
SD-01	..	94	170	140	230	92	..	1500
SD-02	40	32	44	560
SD-03	..	110	..	62	330	260	200	130	..	420

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SUMMARY OF CONCENTRATIONS OF SEMIVOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

SAMPLE NUMBER	PHENANTHRENE (A)	BENZO (C/P/K) FLUORANTHENE	BENZO (A) PYRENE	INDENO 1,2,3(C/D) PYRENE	DIBENZO (A/H) ANTHRACENE	BENZO (G/H,I) PERYLENE	PHENOL (HYDROXY BENZENE)	1,4-DICHLOROBENZENE
SD-01	113	200	130	130		110		
SD-02	37	71	51	50		52		
SD-03	96	156	120	100		100		
SD-04	390	490	390	52		130		
SD-05	150	230	120	85		41		
SD-07	130	190	94	43				
SD-08								
SD-09	57	120	49			700		
SD-10	1200	2700	750	640	250			
SD-12	960	1700	830					
SD-13	53	110	49					
SD-14	1400							
SD-15	100	200	92					
SD-16								
SD-17	57	69	48					
SD-18	130	120	110					
SD-01								
SD-02								
SD-03	240	360	200	110		100		
SD-04								
SD-05								
SD-06								
SD-07								
SD-08								
SD-09								
SD-10								
SD-11								
SD-12								
SD-13								
SD-14								
SD-15								
SD-16								
SD-17								
SD-18								
SD-01								
SD-02								
SD-03								

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SUMMARY OF CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

SAMPLE NUMBER	SAMPLE MEDIA	ISOPHOSOXONE	BENZOIC ACID	NAPHTHALENE	2-METHYL NAPHTHALENE	PYRENE (BENZO (D,E,F) PHENANTHRENE)	2,4,6-TRICHLORO PHENOL	ACENAPHTHYLENE	DIBENZOFURAN
SS-14	SURFACE_SOIL	.	.	.	.	.	.	.	.
SS-05	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-A	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-B	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-C	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-D	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-E	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-F	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-G	TEST_PIT_SOIL	.	.	160	.	.	.	.	.
TP-H	TEST_PIT_SOIL	.	.	97	.	.	.	.	.
TP-I	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-J	TEST_PIT_SOIL	.	.	55	.	.	.	.	.
TP-K	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-L	TEST_PIT_SOIL	.	.	230	100	.	.	.	250
TP-M	TEST_PIT_SOIL	.	.	130	130	.	.	.	140
TP-N	TEST_PIT_SOIL	.	.	140	.	.	.	.	.
TP-O	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-P	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-Q	TEST_PIT_SOIL	.	.	.	.	.	.	.	3200
TP-R	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-S	TEST_PIT_SOIL	.	.	120	.	.	.	.	.
TP-T	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-U	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-V	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-W	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-X	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-Y	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
TP-Z	TEST_PIT_SOIL	.	.	.	.	.	.	.	.
SS-04	.	.	.	.	.	.	.	.	.
SS-05	.	.	.	.	.	.	.	.	.
TP-A	.	.	.	.	.	.	.	.	.
TP-B	.	.	.	.	.	.	.	.	.
TP-C	.	.	.	.	.	.	.	.	.
TP-D	.	.	.	.	.	.	.	.	.
TP-E	.	.	.	.	.	.	.	.	.
TP-F	.	.	.	.	.	.	.	.	.
TP-G
TP-H
TP-I
TP-J
TP-K
TP-L
TP-M
TP-N
TP-O
TP-P
TP-Q
TP-R
TP-S
TP-T
TP-U
TP-V
TP-W
TP-X
TP-Y
TP-Z

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SUMMARY OF CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

UNL	CHRYSENE (E)	FLUORANTHENE	PYRENE	INDENO 1,2,3(C,D)	DIBENZO (A,H)	BENZO (G,H,I)	PHENOL (HYDROXY BENZENE)	1,4-DICHLOROBENZENE
3-14	176	280	130	110	47	45		
3-25	310	550	360	350	480	45		
3-31	1000	1500	960	460	420	410		
3-32	210	270	82	130	130			
3-33	120	280	190	130	130			
3-34	30000	1900	910	2600	390		570	
3-41	45000	31000	47000	26000	25000			
3-42	67	660	360	250	220			
3-43	410							
3-44								
3-45								
3-46								
3-47								
3-48								
3-49								
3-50								
3-51	110			190				
3-52								
3-53								
3-54								
3-55								
3-56								
3-57								
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AR500057

AR500057

SUMMARY OF CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

SAMPLE NUMBER	SAMPLE MEDIA	ISOPHORONE	BENZOIC ACID	NAPHTHALENE	2-METHYL NAPHTHALENE	2,4,6-TRICHLORO PHENOL	ACENAPHTHYLENE	DIBENZOFURAN
TP-N1	TEST_PIT_SOIL	1800	•	470	•	•	•	•
TP-O	TEST_PIT_SOIL	110	•	240	93	•	68	90
TP-P	TEST_PIT_SOIL	57	•	110	99	•	380	170
TP-Q	TEST_PIT_SOIL	•	•	•	•	•	•	•
TP-R0	TEST_PIT_SOIL	•	•	420	•	•	•	•
TP-R1	TEST_PIT_SOIL	670	•	130	•	•	120	•
TP-S	TEST_PIT_SOIL	21000	•	•	•	•	•	•
TP-T	TEST_PIT_SOIL	170	•	760	•	•	•	•
TP-U	TEST_PIT_SOIL	•	•	•	•	•	•	•
TP-V	TEST_PIT_SOIL	•	•	•	•	•	•	•
TP-W	TEST_PIT_SOIL	•	•	•	•	•	•	•
TP-X	TEST_PIT_SOIL	•	•	•	•	•	•	•
TP-Y	TEST_PIT_SOIL	200	•	•	•	•	•	•

SAMPLE NUMBER	2,6-DINITRO TOLUENE	PENTACHLORO PHENOL	PHENANTHRENE	ANTHRACENE	FLUORANTHRENE	PYRENE (B,F,F)	RUTYLENETHYL PHTHALATE	BENZO (A) ANTHRACENE	9IS (2-ETHYLHEXYL) PHTHALATE
TP-N1	•	•	•	•	•	•	•	•	•
TP-O	•	•	1200	750	1900	2200	620	1500	1200
TP-P	•	•	4200	640	6100	7000	12000	4400	2800
TP-Q	•	•	250	93	370	510	6500	210	540
TP-R0	•	•	•	•	•	•	42000	•	3300
TP-R1	•	•	•	•	•	•	•	•	110
TP-S	•	•	•	230	1100	790	450	590	1300
TP-T	•	•	•	•	•	•	•	•	420
TP-U	•	•	75	•	200	190	2400	140	420
TP-V	•	•	2000	•	4600	7600	29000	3600	2100
TP-W	•	•	•	•	•	•	1900	•	3000
TP-X	•	•	1300	•	•	•	740	•	3700
TP-Y	•	•	•	•	•	•	•	•	•

AR500058

AR500058

SUMMARY OF CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS
IN SURFACE AND SUBSURFACE SOILS (UG/KG)

18:36 FRIDAY, SEPTEMBER 12, 1986 6

SAMPLE NUMBER	CHRYSENE (BENZO (A) PHENANTHRENE)	BENZO (A,K) FLUORANTHENE	BENZO (A) PYRENE	INDENO 1,2,3(C,D) PYRENE	DIBENZO (A,H) ANTHRACENE	BENZO (G,H,I) PERYLENE	PHENOL (HYDROXY BENZENE)	1,4-DICHLOROBENZENE
TP-N1	1300	3000	1400	1700	500	2000	40	
TP-G	5100	7400	200	750		3100		
TP-P	240	320	150	100			110	
TP-R0								
TP-A1	470	1100	530	470	150	480		
TP-T								
TP-S	170	270	140	73		64		
TP-U	4500	4200	3800	2500		2700		
TP-W								
TP-X								
TP-Y								
SAMPLE NUMBER	4-METHYLPHENOL	ACENAPHTHENE	4-NITROPHENOL	DIMETHYL PHTHALATE	FLUORENE (2,3 BENZINDENE)	DI-N-BUTYL PHTHALATE	3,3-DICHLORO BENZIDINE	DI-N-OCTYL PHTHALATE
TP-N1		140			120	240		
TP-G		110			200	950		240
TP-P		62			60	140		
TP-R0								
TP-A1						30	120000	
TP-T						66		
TP-S								
TP-U								
TP-W								
TP-X								
TP-Y						180		

AR500059

AR500059

SUMMARY OF CONCENTRATIONS OF CONTAMINANTS FOUND IN SOIL AT THE KANE AND LOWARD SITE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	RANGE
CD	CARBON DISULFIDE	3	2.33	0.58	2.00	3.00	1.00
CA	1,1,1 TRICHLOROETHANE	2	4.50	0.71	4.00	5.00	1.00
TDCE	TRANS 1,2 DICHLOROETHENE	0	.	.	.	.	.
CHCL3	CHLOROFORM	0	.	.	.	.	.
TCE	TRICHLOROETHENE	0	.	.	.	.	.
BENZENE	BENZENE	0	.	.	.	.	.
PENT	4-METHYL 2-PENTANONE	0	.	.	.	.	.
PCE	TETRACHLOROETHENE	0	.	.	.	.	.
TOLUENE	TOLUENE (METHYL BENZENE)	13	25.92	29.01	2.00	77.00	75.00
CHLOROBENZ	CHLOROETHENE	0	.	.	.	.	.
ETHYL	ETHYLBENZENE	0	.	.	.	.	.
XYLENE	TOTAL XYLENES	0	.	.	.	.	.
OELDRIN	DELDRIN (OCTALOX)	2	46.50	2.12	45.00	48.00	3.00
DDE	4,4-DDE	0	.	.	.	.	.
DDD	4,4-DDD	0	.	.	.	.	.
DDT	4,4-DDT	0	.	.	.	.	.
CHLORDAN	CHLORDANE	3	59.00	34.04	24.00	92.00	68.00
PCB1243	AROCHLOR 1243	3	160.00	177.76	20.00	360.00	340.00
PCB1254	AROCHLOR 1254	1	920.00	.	920.00	920.00	0.00
PCB1260	AROCHLOR 1260	2	695.00	233.35	530.00	860.00	330.00
ISO	ISOPHORONE	0	.	.	.	.	.
BA	BENZOIC ACID	3	330.00	113.58	200.00	410.00	210.00
NAPH	1-NAPHTHALENE	4	725.00	231.73	470.00	950.00	480.00
2-NAPH	2-NAPHTHALENE	4	91.75	105.54	35.00	250.00	215.00
2-METHYL NAPH	2-METHYL NAPHTHALENE	2	181.00	196.58	42.00	320.00	278.00
TCF	2,4,6-TRICHLORO PHENOL	2	53.00	.	53.00	53.00	0.00
ACENAPHTHYLENE	ACENAPHTHYLENE	3	148.00	101.84	34.00	230.00	196.00
DIENZOFLURAN	DIENZOFLURAN	1	41.00	.	41.00	41.00	0.00
DIB	2,6-DINITRO TOLUENE	1	660.00	.	660.00	660.00	0.00
DHT	2,6-DINITRO TOLUENE	1	150.00	.	150.00	150.00	0.00
PCP	PENTACHLORO PHENOL	14	250.71	429.92	34.00	1700.00	1666.00
PHNY	PHENANTHRENE	5	168.40	154.63	33.00	390.00	357.00
ANTH	ANTHRACENE	5	477.06	699.61	28.00	2300.00	2272.00
FLU	FLUORANTHRENE	17	418.35	673.12	32.00	2200.00	2168.00
PYRENE	PYRENE (GENZO (D,E,F) PHENANTHRENE)	17	1927.94	5332.71	44.00	23000.00	22956.00
BTP	BUTYLBENZYL PHTHALATE	18	320.00	385.27	44.00	1100.00	1056.00
FAV	RENZO (A) ANTHRACENE	14	1022.78	1535.42	150.00	6600.00	6450.00
CHRYSENE	CHRYSENE (GENZO (A) PHENANTHRENE)	15	340.93	453.68	37.00	1400.00	1363.00
PF	RENZO (G,K) FLUORANTHRENE	14	486.43	760.33	71.00	2700.00	2629.00
APP	BENZO (A) PYRENE	14	220.21	268.17	48.00	880.00	832.00
IP	INDENO 1,2,3(C,D) PYRENE	8	177.00	269.62	48.00	840.00	792.00
BA	DIBENZO (A,H) ANTHRACENE	1	250.00	.	250.00	250.00	0.00
GGP	BENZO (G,H,I) PERYLENE	7	176.14	233.17	41.00	700.00	659.00
PHENOL	PHENOL (HYDROXY BENZENE)	0	.	.	.	.	.
DCC	1,4-DICHLOROETHENE	0	.	.	.	.	.
METHPHEN	4-METHYLPHENOL	0	.	.	.	.	.
ACENAPHTHENE	ACENAPHTHENE	0
NITRO	4-NITROPHENOL	0
DIMETH	DIMETHYL PHTHALATE	0

AR500060

AR500061

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SUMMARY OF CONCENTRATIONS OF CONTAMINANTS FOUND IN SOIL AT THE KANE AND LOWARD SITE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	RANGE
FLUORENE	FLUORENE (2,3 BENZINDENE)	0	.	.	.	.	.
DIBUTYL DICTEOL	DI-N-OCTYL PHTHALATE	0	.	.	.	.	.
OCTYL ANTHRONY	3,3-DICHLORO BENZIDINE	0	.	.	.	.	.
ALUMINIUM	DI-N-OCTYL PHTHALATE	21	9825.24	4911.24	4960.00	21300.00	16340.00
ARSENIC		2	15.00	2.83	13.00	17.00	4.00
BARBITUM		18	12.14	11.83	2.90	54.00	51.10
BE		18	175.28	178.46	37.00	605.00	568.00
CADMIUM	DEPYLLIUM	16	1.14	0.48	0.73	2.50	1.77
CALCIUM		4	2.88	0.92	2.10	4.20	2.10
CHROMIUM		17	5860.47	10237.48	325.00	41300.00	40975.00
CONALT		21	97.76	224.41	17.00	1060.00	1043.00
COOPER		17	11.12	8.77	2.80	31.00	28.20
IRON		20	100.55	103.04	11.00	332.00	321.00
LEAD		21	18146.48	9428.23	7450.00	43400.00	35950.00
CYANIDE		21	241.07	433.56	8.40	1930.00	1921.61
MANGANESE	MANGANESE	6	4.83	5.16	0.73	13.90	13.1
NICKEL	POTASSIUM	21	1576.38	2928.50	252.00	14100.00	13848.0
SILVER		21	346.43	352.95	46.00	1430.00	1386.0
SODIUM		19	42.12	80.09	6.60	367.00	360.4
TIN		21	721.90	365.38	298.00	1720.00	1422.00
VANADIUM		8	2.10	0.37	1.60	2.60	1.00
ZINC		16	130.31	148.59	54.00	655.00	601.00
MERCURY		5	32.00	18.73	11.00	52.00	41.00
SELENIUM		21	45.29	22.85	22.00	119.00	97.00
		21	290.76	484.95	18.00	1690.00	1672.00
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AR500061

AR500061

SUMMARY OF CONCENTRATIONS OF CONTAMINANTS FOUND IN SOIL AT THE KANE AND LOWRARD SITE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	RANGE
CO	CARBON DISULFIDE	9	39.78	101.38	2.00	310.00	308.00
TCA	1,1,1 TRICHLOROETHANE	0	4.00	2.83	2.00	6.00	4.00
TCCE	TRANS 1,2 DICHLOROETHENE	2	1.50	0.71	1.00	2.00	1.00
CHCL3	CHLOROFORM	2	2.00	0.00	2.00	2.00	0.00
TCE	TRICHLOROETHENE	1	2.00	0.00	2.00	2.00	0.00
GENZENE	GENZENE	1	2.00	0.00	2.00	2.00	0.00
PENT	4-METHYL 2-PENTANONE	2	5.00	0.00	5.00	5.00	0.00
PCF	TETRACHLOROETHENE	2	4.00	2.83	2.00	6.00	4.00
TOLUENE	TOLUENE (METHYL BENZENE)	14	1257862.07	4533913.66	1.00	17000000.00	16999999.00
CLORONZ	CHLOROPRENE	6	58.83	66.99	3.00	180.00	177.00
ETHYL	ETHYL BENZENE	6	80047.00	145296.21	3.00	36000.00	35997.00
XYLEN	TOTAL XYLENES	6	298517.83	561680.20	2.00	1400000.00	1399998.00
DIELDRIN	DIELDRIN (OCITALOX)	0	63.00	0.00	63.00	63.00	0.00
DDE	4,4-DDE	1	160.00	0.00	160.00	160.00	0.00
DDT	4,4-DDT	1	86.00	0.00	86.00	86.00	0.00
CHLORDAN	CHLORDAN	3	556.67	486.86	160.00	1100.00	940.00
PCN1249	AROCHELO 1249	9	3367.73	4336.67	190.00	14000.00	13810.00
PCP1254	AROCHELO 1254	7	1875.71	2429.13	400.00	7300.00	6900.00
PCP1260	AROCHELO 1260	1	1100.00	0.00	1100.00	1100.00	0.00
ISO	ISOPHOPONE	10	2422.90	6549.71	47.00	21000.00	20953.00
BA	BAZIC ACID	0	0.00	0.00	0.00	0.00	0.00
NAPH	NAOPHTHALENE	11	259.73	209.04	97.00	760.00	663.00
MAAPH	2-METHYL NAPHTHALENE	5	101.80	16.60	87.00	130.00	43.00
TCP	2,4,5-TRICHLORO PHENOL	0	0.00	0.00	0.00	0.00	0.00
ACEV	ACEVAPHTHALENE	4	327.00	307.30	68.00	740.00	672.00
DIB	DIBENZOFURAN	5	770.00	1359.65	90.00	3200.00	3110.00
DHT	2,6-DINITRO TOLUENE	2	720.00	820.24	140.00	1300.00	1160.00
PCP	PENTACHLORO PHENOL	17	591.29	17233.90	75.00	72000.00	71925.00
PCPH	PENTACHLORO PHENOL	12	2566.75	5934.42	34.00	20000.00	19966.00
ANTH	ANTHRAcene	18	9798.61	28059.18	45.00	120000.00	11995.00
FLU	FLUORANTHENE	18	7191.44	12579.34	96.00	84000.00	83904.00
PRENE	PYRENE (GENZO (D,E,F) PHEANTHRENE)	18	7958.39	15161.25	61.00	62000.00	61939.00
BA	BENZYL PHTHALATE	17	5633.94	13471.92	32.00	52000.00	51968.00
EP	1,3-BIS(2-ETHYLHEXYL) PHTHALATE	22	22672.27	61781.25	110.00	270000.00	269890.00
CHRYS	CHRYSENE (GENZO (A) PHEANTHRENE)	16	5617.31	12833.38	57.00	45000.00	44933.00
BF	FLUORANTHENE	14	7337.86	21297.88	270.00	81000.00	80730.00
IP	INDENO (1,2,3-C,D) PYRENE	14	4073.00	12392.52	82.00	47000.00	46918.00
DA	DIBENZO (A,H) ANTHACENE	14	1925.00	3320.77	73.00	26000.00	25927.00
SGP	7,8-DIBENZO (G,H,I) PERYLENE	4	2919.25	7035.60	40.00	25000.00	24953.00
PHENOL	PHENOL (HYDROXY BENZENE)	12	151.25	175.42	40.00	410.00	370.00
DCB	1,4-DICHLOROBENZENE	1	570.00	0.00	570.00	570.00	0.00
HTP	4-METHYLDIPHENOL	4	78.75	25.21	55.00	110.00	55.00
ACB	ACRYLPHENOL	5	70.60	30.90	62.00	140.00	78.00
MIT	4-MITROPHENOL	5	70.60	30.90	570.00	570.00	0.00

AR500062

AR500062

18:49 FRIDAY, SEPTEMBER 12, 1986 4

SUMMARY OF CONCENTRATIONS OF CONTAMINANTS FOUND IN SOIL AT THE KANE AND LOWARD SITE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	RANGE
FLUORENCE	FLUORENCE (2,3 BENZINDENE)	6	1220.00	2588.38	60.00	6500.00	6440.00
DIURYL	DI-N-NITYL PHTHALATE	19	795.11	1623.19	30.00	6600.00	6570.00
DICL97	2,3-DICHLORO BENZIDINE	1	120000.00		120000.00	120000.00	0.00
OCTYL	DI-N-OCTYL PHTHALATE	2	290.00	70.71	240.00	340.00	100.00
ALUMINUM		30	8746.33	3062.16	1720.00	14700.00	12980.00
ANTIMONY		2	14.00	0.00	14.00	14.00	0.00
ARSENIC		22	25.05	35.59	1.10	166.00	164.90
BARIUM		30	572.73	1219.52	16.00	6370.00	6354.00
BE	BERYLLIUM	23	1.23	0.45	0.64	2.20	1.56
CAESIUM		16	11.11	21.19	2.60	89.00	86.40
CALCIUM		20	29311.63	46686.91	152.00	221000.00	220848.00
CHROMIUM		29	247.03	462.22	3.80	1990.00	1986.20
COBALT		29	17.04	13.54	2.30	59.00	56.70
COPPER		30	292.17	446.34	14.00	1790.00	1776.00
IRON		30	37283.33	25917.59	2600.00	117000.00	114400.00
LEAD		30	1084.05	2373.98	6.90	13600.00	13593.10
CYANIDE		5	8.74	12.54	0.70	39.90	30.00
MG	MAGNESIUM	29	1645.38	1370.12	253.00	6810.00	6557.00
MN	MANGANESE	29	371.69	316.49	34.00	1220.00	1136.00
NICKEL		29	387.77	395.21	9.30	4530.00	4520.00
K	POTASSIUM	28	696.75	141.87	298.00	1480.00	1182.00
SILVER		3	8.07	7.92	1.20	17.00	15.10
SODIUM		29	506.66	771.34	19.00	3230.00	3211.00
TIN		15	44.93	65.89	12.00	272.00	260.00
VANADIUM		29	72.10	98.77	3.80	413.00	409.21
ZINC		29	946.79	1903.50	35.00	10300.00	10264.00
MERCURY		20	0.59	0.47	0.10	1.60	1.50
SELENIUM		2	17.57	21.57	2.50	33.00	30.50

SAMPLE MEDIA=TEST_PIT_SOIL

AR500063

AR500 18

Inter-Office Memorandum



TO: Charlie Kufs cc: Earl Hansen (Memo Only)
Ralph Shapot (Memo Only)

FROM: Dianne S. Therry *DT* DATE: 18 July 1986
PROJECT: Kane & Lombard W.O. NO.: A191-RII-SADAT
SUBJECT: Preliminary Sample Results
ACTION:

Attached for internal use are the lab data sheets for CLP Data received for QA data review (data validation).

Case #/Site ID: 6040/Kane & Lombard
Sample Numbers: CE 801-CE 818
CE 819-CE 829

Analyses: HSL Organic

Site Manager: Charlie Kufs

Please keep these results confidential pending validation of the data package.

Attachment

AR500064

AR500064

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
BUILDING 53, BOX 25227, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

TO Stephen R. Wassersug, Director, Air and
Waste Management Division, Region 3

DATE: June 26, 1984

Attention: Robert Caron

FROM Carroll G. Wills, Chief
Enforcement Specialist Office

**PRIVILEGED
PREPARED FOR LITIGATION**

SUBJECT: Results of RCRA Characteristic Tests for Wastes from the Kane and Lombard
Streets Site, Baltimore, Maryland

Attached is Dr. Lowry's report of the subject analysis requested by your office. Based upon his reported results, the contents of drum number 114 were EP toxic for cadmium and the contents of drum number 8 were EP toxic for chromium (VI). Three of the drums, (numbers 114, 311, and 186) exhibited flashpoints less than 60°C, however they may not be RCRA ignitability wastes because the samples were not liquids.

You may contact Dr. Lowry at FTS 776-5132 if you or your staff have any questions concerning this analytical support.

Attachment

cc: Sheldon Novick, Region Counsel, Region III

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ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
BUILDING 53, BOX 25227, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

Dr. T.O. Meiggs, Director,
Laboratory Services Division

DATE: June 25, 1984

Dr. J.H. Lowry, Chief
Inorganic Analytical Section



RCRA Ignitability and EP Toxicity Characterization Analysis Results for
Drum Samples Collected from Kane and Lombard Street Drum Site, Baltimore,
Maryland, Project Nos. NEIC: B35 SMO: 2789

On June 4, 1984, eleven drum samples and one field blank were received from the Regulated Substance Laboratory for RCRA Ignitability and EP Toxicity characterization analysis. Attached is a table reporting the results of these analyses. For a waste to characterize as a RCRA Ignitability Hazardous Waste, as determined by its flashpoint, the waste must be a liquid. All of the drum samples were solids or gels. A number of the samples had a solvent smell and therefore were tested for flashpoint. Three of the drum samples had flashpoints less than 60°C and none of the samples contained ethanol. As reported in the attached table, one of the ignitable samples and another sample were found to be EP Toxic Hazardous Wastes

Since all of the samples were solids or gels, we performed an extraction that screened the samples for EP Toxicity. This screening extraction uses the maximum allowable acetic acid at the same extraction ratio and time as the RCRA EP Toxicity procedure except that no pH monitoring is needed and only 10 grams of sample is extracted. The screening extraction results are usually higher than the RCRA EP Toxicity results. The results of the screening extraction are used to determine which of the samples warrant the more tedious RCRA EP Toxicity characterization. Reported in the attached table are the results of the screening extraction and the RCRA EP Toxicity characterization. Based on the screening results, five of the eleven drum samples were characterized by the RCRA EP Toxicity test. The sample from Drum 114 was found to be EP Toxic for cadmium with an EP value of 1.90 mg/L and the sample from Drum 8 was found to be EP Toxic for chromium with an EP value of 43.2 mg/L total chromium and 39 mg/L hexavalent chromium. As indicated by the lead values obtained for the screening test of 18.8 mg/L and the RCRA EP Toxicity of 3 mg/L for the sample from Drum 157, the screening method extracts more than the RCRA method.

The flashpoints were determined with a Closed Cup Setaflash Tester. The precision as measured by the standard deviation of triplicate analyses was about 0.5 °C. Para-xylene was run concurrently with the samples as a control. All flashpoints have been corrected for an atmospheric pressure of

617.98 Torr which was obtained from the U.S. Weather Service on the day the analyses were performed. The EP Toxicity extraction was performed in accordance with the procedures given in the OSW 846 manual. All extracts were analyzed first by Inductively Coupled Argon Plasma Optical Emission Spectroscopy for all elements except mercury. Mercury was determined after a wet digestion by Cold Vapor Atomic Absorption Spectroscopy with standard additions. The EP Toxicity value for cadmium from the sample for Drum 114 and the total chromium value for the sample from Drum 8 were determined by Flame Atomic Absorption Spectroscopy with standard additions. The hexavalent chromium value for the sample from Drum 8 was obtained by Differential Pulse Polarography with standard additions. The precision for the EP Toxic values were 0.9 %RSD for the cadmium value of 1.9 mg/L, 1.5 %RSD for the total chromium of 43 mg/L and 0.9 %RSD for the hexavalent chromium value of 39 mg/L. Control samples for each element except for the hexavalent chromium were analyzed concurrently with the extracts and all results fell within the acceptance limits.

Attachments

AR500067



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : June 6, 1984

SUBJECT: Kane & Lombard Results

FROM : Daniel K. Donnelly (3ES21) *DKD*
Chief, Annapolis Laboratory

TO : Bob Caron (3HW22)

Enclosed are copies of the Kane & Lombard site analytical results. Most of the data has been given to Jay by phone.

DKD: jr

Enclosure
a/s

cc: Jay Matwani

AR5 AR5.00068



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : May 25, 1984
SUBJECT: Kane & Lombard Sts. Site - PCB/Pesticides
Superfund Removal, 840517-04 and 840521-01
FROM : James Jerpe *JJ*
Chemist
TO : Daniel K. Donnelly
Chief, Annapolis Lab
THRU : John Austin *JA*
Team Leader, Organic Analysis Unit

Samples were examined for the presence of PCBs and pesticides.

Sample extracts were chromatographed on a SE-54 narrow-bore capillary column at 230°C using electron-capture detection. Known concentrations of authentic standards were chromatographed under the sample conditions whereby relative retention times were compared to the elution of standard.

Attached is a list of standards whose relative retention times were compared with sample and the lowest detection limit for each compound.

Sample Description:

<u>Lab No.</u>	<u>Description</u>	<u>Results</u>
840517-01	Kane & Lombard Sts. Site, Drum #2 Area, Sta. 02	N.D.
-03	Kane & Lombard Sts. Site, Revine 1/1, Sta. 01	N.D.
-04	Kane & Lombard Sts. Site, Blank	N.D.
840521-01	Kane & Lombard Sts. Site, Puddle #2, Sta. W-1	N.D.

JJ:ad

cc: P. J. Krantz
QAO, CRL

AR500069

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PESTICIDE/PCBS PRIORITY POLLUTANT COMPOUND DETECTION LIMITS

<u>Parameter</u>	<u>Cas Number</u>	<u>Water ppb</u>	<u>Soil/Sediment mg/kg</u>
Aldrin	309-00-2	0.003	.03
Alpha BHC	319-84-6	0.002	.02
Alpha Endosulfan	115-29-7	.005	.05
Beta BHC	319-85-7	0.004	.04
Beta Endosulfan	115-29-7	0.01	.1
Chlordane	57-74-9	0.04	.4
4,4'DDD	72-54-8	.012	.12
4,4'DDE	72-55-9	.006	.06
4,4'DDT	50-29-3	.016	.16
Delta BHC	319-86-8	0.004	.04
Dieldrin	60-57-1	.006	.06
Endosulfan Sulfate	1031-07-8	.03	.3
Endrin	72-20-8	.009	.09
Endrin Aldehyde	7421-93-4	.023	.23
Gamma BHC (Lindane)	58-89-9	0.002	.02
Heptachlor	76-44-8	.002	.02
Heptachlor Epoxide	1024-57-3	.004	.04
Toxaphene	8001-35-2	0.40	4.0
PCB 1016	12674-11-2	.04	0.4
PCB 1221	11104-28-2	.10	1.0
PCB 1232	11141-16-5	.10	1.0
PCB 1242	53469-21-9	.05	0.5
PCB 1248	12672-29-6	.08	0.8
PCB 1254	11097-69-1	.08	0.8
PCB 1260	11096-82-5	.15	1.5

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REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : June 5, 1984

SUBJECT: GC/MS Analysis of Superfund Removal Samples 840517-01, -03, -04 and 840521-01 from Kane and Lombard Streets Site

FROM : John Austin *JA*
Chemist

Joseph L. Slayton *JS*
Chemist

TO : Daniel K. Donnelly
Chief, Annapolis Lab

Samples were examined for the presence of organic compounds listed as "Base/Neutral" and "Acid" extractable priority pollutants using fused silica capillary column/gas chromatography/mass spectrometry. Concentrations of these compounds were determined using the relative response of authentic standards to the internal standard. The detection limit was 1 ppb for the water sample and 0.10 mg/kg (wet weight) for the soil sample 840517-03 and 1.0 mg/kg (wet weight) for 840517-01.

The samples were also examined for the presence of compounds in addition to those on the priority pollutant list. Tentative identification of these compounds was made on the comparison of sample spectra to the EPA/NIH Mass Spectral Library. Concentrations for these compounds were estimated based on the response of the internal standard.

All reported sample values have been corrected for any blank contamination.

Sample Description:

<u>Lab No.</u>	<u>Description</u>
840517-01	Kane and Lombard Streets Site, Drum #2 Area, Sta. 02, Soil
-03	Kane and Lombard Streets Site, Revine 1/1, Sta. 01, Soil
-04	Kane and Lombard Streets Site, Blank
840521-01	Kane and Lombard Streets Site, Puddle #2, Sta. W-1

JA/JLS:ad

cc: P. J. Krantz
QAO, CRL

AR500071

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U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Kane and Lombard Streets Sites - Superfund - Removal

Sample Number: Reagent Blk. 840517-01 (Dup.) 840517-01 840517-03 840521-01
 ng/uL mg/kg mg/kg mg/kg (wet weight) (wet weight) (wet weight)

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number	Extract	840517-01 (wet weight)	840517-01 (wet weight)	840517-03 (wet weight)	840521-01
Bis(2-Ethylhexyl) Phthalate	117-81-7	1.3	124	95	--	--
Di-n-Butylphthalate	84-74-2	1.4	--	--	--	--
Fluoranthene	206-44-0	--	Trace (0.7)	Trace (0.2)	Trace (0.02)	--
Isophorone	78-59-1	--	9.6	5.4	--	--
N-Butylbenzylphthalate	85-68-7	--	--	--	Trace (0.05)	--
N-Nitrosodiphenylamine detected as N-Phenylbenzenamine	86-30-6	--	--	--	Trace (0.03)	--
Pyrene	129-00-0	--	--	--	Trace (0.02)	--

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

None Detected

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U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Kane & Lombard Streets Site - Superfund Removal

Sample Number: 840517-01

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet wt.)</u>
399	Hydrocarbon (Best Match 3-Methyheptane)	2.8
439	Hydrocarbon (Best Match 3-Methylhexane)	4.1
970	C ₁₀ H ₁₈ O Isomer (Best Match 1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2 -ol)	2.4
997	.alpha.alpha.,4-Trimethyl-3-cyclohexane-1-methanol	1.2
1148	1,2-Benzenedicarboxylic acid	3.1
1527	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	2.5
1610	Hydrocarbon (Best Match 2,4,6-Trimethyloctane)	Trace (0.8)
1620	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	3.9
1690	Hydrocarbon (Best Match Hexadecane)	4.3
1777	Hydrocarbon (Best Match Tetradecane)	4.1
1837	Hydrocarbon (Best Match 1,6,10,14-Tetramethylpentadecane)	10
1855	Hydrocarbon (Best Match 4,7-Dimethylundecane)	4.3
1880	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	8.4
1958	Hydrocarbon (Best Match Nonadecane)	12
2015	Hydrocarbon (Best Match 3-Methylhexadecane)	10
2259	Hydrocarbon (Best Match Nonadecane)	9.0

Sample Number: 840517-01 (Dup.)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet wt.)</u>
994	.alpha.alpha., 4-trimethyl-3-cyclohexane-1-methanol	Trace (0.7)
1145	1,2-Benzenedicarboxylic acid	2.1
1523	Hydrocarbon (Best Match 3,4-Dimethyldecane)	1.3

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U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Kane & Lombard Streets Site - Superfund Removal

Sample Number: 840517-01 (Dup.)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet wt.)</u>
1606	Hydrocarbon (Best Match 3,7-Dimethylundecane)	Trace (0.8)
1615	Hydrocarbon (Best Match 2,7,20-Trimethyldodecane)	2.7
1686	Hydrocarbon (Best Match 4,6-Dimethylundecane)	2.7
1690	Hydrocarbon (Best Match 3,8-Dimethylundecane)	1.9
1772	Hydrocarbon (Best Match 4,7-Dimethylundecane)	4.1
1832	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	4.5
1875	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	4.6
1925	Hydrocarbon (Best Match Hexadecane)	3.7
1952	Hydrocarbon (Best Match Heptacosane)	13
2010	Hydrocarbon (Best Match Heptadecane)	11
2251	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	9.0

Sample Number: 840517-03

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet wt.)</u>
559	C ₈ H ₁₀ Isomer (Best Match Ethylbenzene)	Trace (0.07)
1534	Hydrocarbon (Best Match 3,3-Dimethylhexane)	Trace (0.04)
2014	O-decylhydroxylamine or 2,7,10-Trimethyldodecane)	Trace (0.02)
2109	Octadecanal or hexadecanal	Trace (0.04)
2312	Hydrocarbon (Best Match 4,7-Dimethylundecane)	0.4
2535	Hydrocarbon (Best Match 3,7,10-Trimethyldodecane)	0.4
2867	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	0.5

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U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Kane & Lombard Streets Site - Superfund Removal

Sample Number: 840521-01

Base/Neutral Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (ppb)</u>
1475	Hydrocarbon (Best Match 3-Dodecyne)	Trace (0.6)
1837	Hydrocarbon (Best Match 3,7-Dimethylnonane)	1.4
1879	Hydrocarbon (Best Match 3,5,24-Trimethyltetracontane)	1.2
1956	Hydrocarbon (Best Match 2,6,11-Trimethyldodecane)	2.8
2014	Hydrocarbon (Best Match 4,6-Dimethylundecane)	2.5
2137	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	6.6
2174	Hydrocarbon (Best Match 2,6,11-Trimethyldodecane)	2.3
2211	Hydrocarbon (Best Match 3,5-Dimethylundecane)	3.6
2256	Hydrocarbon (Best Match 2,7,10-Trimethyldodecane)	3.6

Sample Number: 840521-01

Acid Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (ppb)</u>
948	Octanoic acid	Trace (0.5)
1430	3-Penten-2-ol	Trace (0.3)

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% Solids by Weight

840517-01 64.0%
-03 92.0%

Surrogate Recovery

Sample No.	% Recovery				
	<u>2-Fluoro-phenol</u>	<u>D6-Phenol</u>	<u>D5-Nitro-benzene</u>	<u>Decafluoro biphenyl</u>	<u>D10 Pyrene</u>
840517-01	96.1	106	100	96.9	60.6
-03	92.1	81.9	90.7	75.3	95.5

Waters not spiked due to lab accident.

Quality Control

1. Before acquisition of any samples the mass spectrometer is calibrated using FC43.
2. The calibration is verified by obtaining the spectra of a known compound (DFTPP). All mass assignments and relative abundances are found to be in acceptable ranges or the instrument is adjusted until suitable spectra of the known are obtained.
3. Immediately before analysis each sample is spiked with an internal standard D10-anthracene. All quantitation or estimates of concentration are made in comparison to the internal standard.
4. Mixed standards of extractable priority pollutants are analyzed before each group of samples. The relative response of each compound versus the internal standard is determined for use in quantitation.
5. For each group of samples extracted a method blank is prepared and examined for laboratory introduced contamination.
6. The soil samples were spiked with a mixture of surrogate compounds prior to analysis. Recovery for each was determined to check for matrix effect. The water samples were inadvertently spiked with surrogates at too low a concentration to be quantitatively detected.
7. The soil sample 840517-01 was extracted and analyzed in duplicate.

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	STATION LOCATION			REMARKS
			STA. NO.	DATE	TIME	
01	Kane & Lombard St. Site <i>(Signature)</i>	4	Rawine 1/4	2	2	84051703 - 28597, 3-28579
00		Blank	84051704	4	2	3-28578, 3-28580, 3-28581
02		Drum # 2 Area		2	2	3-28587, 3-28590
01-1		Bubble #2	84051702	8	2	3-28585, 3-28586, 3-28587
<p>802 jars 1/2 gallon amber 1 liter plastic</p>						
<p>received at CRL 1 liter plastic container extra for STA 00 SR 1/17/84 4/17/84</p>						
<p>Upon receipt at CRL I did not receive 1 liter plastic container for STA W-1. Also 1 VOA was leaking. IR</p>						
<p>Sampling date on tag 3-28582 Is 5/17/84. Date on custody sheet reads 5/16/84 IR. STA 02</p>						
Relinquished by: <i>(Signature)</i>		Date / Time	Received by: <i>(Signature)</i>	Date / Time	Relinquished by: <i>(Signature)</i>	Received by: <i>(Signature)</i>
Relinquished by: <i>(Signature)</i>		Date / Time	Received by: <i>(Signature)</i>	Date / Time	Relinquished by: <i>(Signature)</i>	Received by: <i>(Signature)</i>
Relinquished by: <i>(Signature)</i>		Date / Time	Received for Laboratory by: <i>(Signature)</i>	Date / Time	Remarks	
Relinquished by: <i>(Signature)</i>		Date / Time	Received for Laboratory by: <i>(Signature)</i>	Date / Time	Remarks	

AR500077



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : May 29, 1984

SUBJECT: Metals and Cyanide Determinations of Kane and Lombard Samples,
840517-01, -03, -04; 840521-01; 840522-01 (Superfund Removal)

FROM : B. A. Sammons ^{BAS} K. K. F. Worthington ^{KKFW} C. K. Walling ^{CKW} Norman Fritsche ^{NF}
Chemist Physical Scientist Physical Science Tech. Environmental Scier

TO : Daniel K. Donnelly
Chief, Annapolis Laboratory

THRU : E. Ramona Trovato ^{ERT}
Team Leader, Inorganic Analysis Section

Samples were analyzed colorimetrically for cyanide and by flame, furnace, and cold vapor atomic absorption spectroscopy for metals. The results are presented in the attached table.

Due to lead and chromium contamination of the field blank, the values reported for samle 840521-01 for lead and chromium cannot be attributed to contamination at the sampling site. Sample bottles and acid used should be critically examined for the source of contamination. Once the problem has been identified and corrected, the samples should be re-collected and re-analyzed.

Additional quality control data are available upon request.

Sample Description:

<u>Lab No.</u>	<u>Description</u>
840517-01	Kane & Lombard Sts. Site, Drum #2 area, Sta. 02, Soil
-03	Kane & Lombard Sts. Site, Revine 1/1, Sta. 01, Soil
-04	Kane & Lombard Sts. Site, Blank
840521-01	Kane & Lombard Sts. Site, Puddle #2, Sta. W-1
840522-01	Kane & Lombard, Field Blank for Sample 840521-01

BAS/KKFW/CKW/NF:ad

cc: P. J. Krantz
QA0, CRL

AR50007

AR500079

U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Kane & Lombard Sts. Site - Superfund Removal

Sample Number: 840517-01 mg/kg 840517-03 mg/kg 840517-04 ug/L 840521-01 ug/L 840522-01 ug/L
 (Field Blank) (Field Blank) (Field Blank)

METALS

Parameter

Antimony	<0.5(106%)	<0.5*(MSA)	<5	33+0.3(MSA)	<5
Arsenic	17+1(101%)	7+1(MSA)	<2	<2*(107%)	<2
Beryllium	<.5*(106%)	<.5*	<5*(109%)	<5*	<5*
Cadmium	6.2+2(98%)	2.0+0	<1.0	<1.0*(MSA)	<1.0
Chromium	6,490+30(99%)	29+1	<2	6**+.4(MSA)	29.1
Copper	109+6	23+0(105%)	<25	<25*	<25
Lead	324+6(106%)	33+1(96%)	<2	78***(MSA)	107
Mercury	0.4+.06	<0.1(90%)	<0.2	<0.2*(98%)	Not Analyzed
Nickel	2,000+19(91%)	11.6+.7	<25	31.6+7.0(97%)	<25
Selenium	0.4(MSA)	<0.2*(MSA)	<2	<2*(110%)	<2
Silver	0.72(MSA)	<0.10*(109%)	<1.0	<1.0*(MSA)	<1.0
Thallium	<1.0(MSA)	<1.0*(MSA)	<10	<10*(MSA)	<10
Zinc	982+21(112%)	44+0.2	15	88(104%)	<10*
Cyanide	<1.2	<1.2	<20	<20*(110%)	<20

*Analyzed in duplicate, both values below the specified detection limit.
 **Results highly questionable due to contamination of the field blank (840522-01).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : May 21, 1984
SUBJECT: Kane and Lombard Streets Site: Water and Soil Samples for VOA's
Superfund Removal, (5/17/84 - 5/21/84) 840517-01-04
FROM : Rick Dreisch
Chemist RD
TO : Daniel K. Donnelly
Chief, Annapolis Lab
THRU : John Austin
Team Leader, Organic Analysis Section

The above samples were analyzed by GC/MS for volatile organic compounds amenable to the purge and trap technique. The exhibited detection limit was a nominal 1 ppb (ug/L) for the water samples and 5 ppb (ng/g) for the soil.

Sample Description:

<u>Lab No.</u>	<u>Description</u>
840517-01	Kane & Lombard Sts. Site, Drum #2 area, Sta. 02
-02	Kane & Lombard Sts. Site, Puddle #2, Sta. W-1
-03	Kane & Lombard Sts. Site, Revine 1/1, Sta. 01
-04	Kane & Lombard Sts. Site, Blank

RD:ad

cc: Diana Pickens
P. J. Krantz
QAO, CRL

AR500081

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QA Summary

	Average % Recovery	
	5/17	5/18
Bromochloromethane	100 + 8	100 + 7
1,4-Dichlorobutane	96 + 2	108 + 5
para-Bromofluorobenzene	96 + 6	102 + 5
n =	3	4

Soil Spike

% Recovery

1,1-Dichloroethylene	114
Methylene Chloride	133
Trans-1,2-Dichloroethylene	115
1,1-Dichloroethane	112
Chloroform	124
1,1,1-Trichloroethane	111
1,2-Dichloroethane	120
Benzene	108
Carbon Tetrachloride	116
1,2-Dichloropropane	115
Trichloroethylene	117
Bromodichloromethane	122
2-Chloroethylvinyl Ether	105
Tran-1,3-Dichloropropylene	110
Cis-1,3-Dichloropropylene	106
Toluene	104
1,1,2-Trichloroethane	121
Dibromochloromethane	115
Tetrachloroethylene	113
Chlorobenzene	109
Ethyl Benzene	95
Bromoform	117
1,1,2,2-Tetrachloroethane	122

U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Kane and Lombard - Superfund Removal

Sample Number: 840517-01 ng/g 840517-02 ug/L 840517-04 ng/g

VOLATILES - STANDARD EQUATABLE

	Cas Number	840517-01 ng/g	840517-02 ug/L	840517-04 ng/g
trans-1,2-Dichloroethylene	156-60-5	--	0.6	--
Trichloroethylene	127-18-4	--	56	--

VOLATILES - NON-STANDARD EQUATABLE**

cis-1,2-Dichloroethylene	156-59-2	--	(170)	--
Thiobis Methane?		--	(1)	--
Chloroethyne		--	(Trace) ¹	--

**Estimated concentration based upon internal standard/external standard calculation.

¹Trace = <0.5 ppb

AR500083